UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,449	11/07/2003	Takuya Morishita	8028-1045	9706

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-19 and 21-23* is/are rejected.

7)☒ Claim(s) *9 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office action for US Patent Application 10/702,449 is in response to communications filed 14 February 2008, in reply to the Non-Final Rejection of 15 November 2007. Currently, claims 1-23 are pending.

2.   In the previous Office action, claims 1, 2, 4-7, 10, 12, 13, 15-18, 21, and 23 were rejected under 35 U.S.C. 102(b) as anticipated by European Patent Application publication 1,089,571 A2 (Kato). Claims 3, 11, 14, and 22 were rejected under 35 U.S.C. 103(a) as obvious over Kato in view of US Patent 6,532,333 B2 (Ito). Claims 8 and 19 were rejected under 35 U.S.C. 103(a) as obvious over Kato in view of US Patent 6,707,778 B1 (Lin et al.). Claim 20 was objected to on a minor informality. Claims 9 and 20 were found to contain allowable subject matter, but objected to as dependent on rejected base claims.

Response to Amendment

3.   Applicant's amendment to the claims has been considered. The objection to claim 20 on informalities is withdrawn.

Drawings

4.   Replacement drawings were received on 14 Feburary 2008. These drawings are acceptable.

Response to Arguments

5.   Applicant's arguments filed 14 February 2008 have been fully considered but they are not persuasive. Applicant argues that cited prior art Kato does not teach the limitations in independent claims 1 and 12 of "rewriting a header of [video/audio] data in the designated range to constitute nullified data" and of designating a range of data to be deleted "by using a deletion start frame and deletion end frame". The examiner respectfully disagrees.

Regarding the claimed "header", in Kato, when packets are erased, they are replaced with null data to fill an aligned unit of 32 packets (paragraph 0094). When a null packet is produced, the packet is output to a transport packet header adder (paragraph 0031), where the packets are given a special null packet PID value of 0x1FFF (paragraph 0032). Since PID is a known field in an MPEG2 packet header, it is respectfully submitted that the generation of a null packet header during a deletion operation is a "rewriting of a header of video data in the designated range to constitute nullified data" according to the present invention. See Watkinson, J., *The MPEG Handbook*, p. 358 for a diagram of an MPEG2 transport stream packet containing a PID in the packet header.

Regarding the claimed "start frame" and "end frame", while in Kato, a user inputs the amount of program deletion according to time (paragraph 0091), it is respectfully submitted that in step S43 of Kato, the time is converted to "aligned units" and determines the address for the start and end aligned units of deletion (paragraph 0092). These "aligned units" are disc sectors of 32 packets of 192 bytes each, for a total of

6144 bytes (paragraph 0035). Within the aligned unit that contains a start point or end

point is found, the address of the start point within the aligned unit is found using the

method of step S33 (paragraph 0092). In step S33, in turn, Kato determines the packet

number of the entry point having the PTS value of the start position (paragraph 0081).

This start position is defined as an I picture, in accordance with the MPEG-2 standard

(paragraph 0023). Then, in Kato, when a user inputs a start or end time, this time is

converted to the address of the nearest I frame of the selected time. Therefore, it is

respectfully submitted that Kato discloses the claimed feature of start frames and end

frames: the I frames nearest a selected start time and end time.

Since it has been shown that the Kato reference indeed discloses the disputed

limitations of the independent claims, all prior art rejections are respectfully maintained.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-7, 10, 12, 13, 15-18, 21, and 23 are rejected under 35

U.S.C. 102(b) as being anticipated by European Patent Application Publication

1,089,571 A2 (Kato). Kato teaches a video transport stream recording and reproduction

apparatus. Regarding claims 1 and 12, figure 16 of Kato illustrates the operation of a

"sectional deletion" function. In step S41, an entry point map is loaded into a controller,

and in step S42, the user inputs the deletion range into the controller [0091]. This corresponds to the "designating a range of the video/audio data to be an editing object". Since the user designates the deletion range based on time [0091], and in MPEG-2, only one frame is displayed at a time, there is necessarily a "start frame" at the start of the deletion range and an "end frame" at the end of the deletion range. Specifically, when a user selects a time, the editor of Kato determines the address of the edit time [0092] and finds the nearest entry point, or I frame [0023] as the frame in which to stop or resume reproduction after the edit is made. These nearest entry point I frames correspond with the claimed "start frame" and "end frame". In step S43, the controller converts the deletion range into units aligned with the 192-byte MPEG-2 transport stream packets [0092], and in step S44, the controller erases data by overwriting the TS packets with null packets [0093]. Since the null packets are given a special PID value in their packet headers [0032] when they are generated [0031], the production of null packets corresponds with the claimed "rewriting a header" to show null data. At step S45, the entry map is updated to reflect the removed packets, by changing the offset number on each remaining packet after the deleted section [0095]. Regarding claim 23, the invention of Kato may be implemented in software (paragraphs 0117-0119).

Regarding claims 2 and 13, in Kato, a deleted section is replaced with null data [0093]. Regarding claims 4 and 15, in Kato, the updated entry map reflecting the editing is written onto a recording medium [0095]. Regarding claims 5 and 16, null packets are determined based on an offset value in the packet header [0050]. Regarding claims 6, 7, 17, and 18, the deletion range is measured according to an elapsed time of a deletion

range [0091], and converted to an offset number of aligned packets [0095]. The

undeleted packets are kept in the recording medium [0096]. Regarding claims 10 and

21, Kato operates on MPEG2 video [0028].

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 3, 11, 14, and 22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kato in view of US Patent 6,532,333 B2 (Ito). Claims 3, 11, 14, and

22 are directed to re-encoding the first frame after the end frame of a deleted portion of

video as an intra frame. Kato does not teach this feature, but instead aligns a deletion

range so that the next frame presented after a deleted region is the nearest intra frame

to the end frame [0116].

Ito teaches a video editing system. Regarding claims 3, 11, 14, and 22, in Ito, a

user cuts video previous to a cut position CP (column 5: lines 34-41), which may be in

the middle of an MPEG-2 group of pictures (GOP). Next, Ito checks the picture at the

cut position to determine if this picture is an I-picture, a P-picture, or a B-picture. If the

picture is an I-picture, cut video Va before the picture is changed to "reproduction

invalid" dummy data. Otherwise, the picture is first re-encoded as an I-picture (column

5: lines 43-65).

Kato discloses the claimed invention except for re-formatting a video frame as an intra-frame. Ito teaches that it was known to reformat a P-picture or a B-picture following an edit point as an I-picture. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set the format of a pictures following a deleted range an I-picture, as taught by Ito, since Ito states in column 2: lines 18-39 that such a modification would reduce reproduction error in a video having an edit point in which video is resumed in the middle of a GOP.

4.   Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of US Patent 6,707,778 B1 (Lin et al.). Claims 8 and 19 are directed to rewriting a header in an editing operation to indicate the size of data to be nullified. Kato does not teach this limitation.

Lin et al. teaches a video editing system. Regarding claims 8 and 19, Lin et al. may delete video frames in one of three ways: first, by deleting the data from a bitstream; second, by replacing data with stuffing data; and third, setting a PES_packet_length field in the header of an MPEG-2 packetized elementary stream to zero to delete a packet (column 9: lines 4-8). The effect of changing a PES_packet_length field in a packet header is to change the length of the packet read in a decoder. By setting this to zero, the packet becomes a skip packet.

Kato discloses the claimed invention except for changing header data in an edit operation in accordance with the size of data to be skipped. Lin et al. teaches that it was known to edit packetized video by adjusting a packet length field in a packet length

header. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the packet length field adjusting means of Lin et al. into the editing system of Kato, since Lin et al. states in column 3: lines 45-55 that such a modification would allow video editing without needing to decode encoded MPEG signals.

Allowable Subject Matter

6.   Claims 9 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. "A Low-Cost Editor for MPEG-1 Stream Systems" (Shiu et al.) teaches an MPEG-1 editor that modifies sequence headers and GOP headers, and temporal reference numbers in picture layer headers (§ 3.4) in response to an editing operation.

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Werner, whose telephone number is (571)272-9662. The examiner can normally be reached on MWF from 9:00-6:30, TR from 9:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri, can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information
system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. N. W./
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621